portion 7. The tooth-shaped portion is the one which imparts the final shape of the ceramic core when the ceramic material is put therein and is molded. The ring 4 is for holding the investment material 2 and is made of a cast iron or a stainless steel, and the backing member 3 works to compensate for the expansion of the investment material at the time of heating and is a cloth-like ceramic material.

In the mold 1, a solid lubricant film 8 is formed on the surface of the sprue portion 6 and on the surface of the investment material of the tooth-shaped portion 7. The solid lubricant film 8 may be formed on at least the surface of the investment material of the tooth-shaped portion 7 and needs not necessarily be formed on the surface of the investment material of the sprue portion 6. For obtaining an enhanced effect, however, it is desired that the solid lubricant film is formed on the surface of the investment material of the sprue portion, too.

Next, the method of fabricating the mold 1 will be described with reference to Fig. 3. First, a wax pattern 9 having the shape of the crown core is formed on a gypsum model of a tooth on which a ceramic crown which is an object article will be mounted (the shape of the wax pattern 9 corresponds to the shape of the tooth-shaped portion 7). Next, a sprue line 10 (usually made of wax, and the shape of the sprue line 10 corresponds to the shape of a sprue portion 6) is stud on the wax pattern 9 and is installed on a pole member 112 (the shape of the pole member corresponds to the shape of the ceramic material-holding portion 5) of the crucible former 11. The crucible former 11 is the one in which the pole member 112 having a recessed fitting portion 113 at the central portion in the upper surface thereof, is formed at the central portion of a cylinder 111 with bottom. The sprue line 10 connected to the wax pattern 9 is fitted to the

recessed fitting portion 113, so that the wax pattern 9 is secured. From the standpoint of easy handling and easy moldability, it is desired that the crucible former 11 is the one in which the pole member 112 is tapered at 0.005 to 0.120 to possess a diameter that expands downward and, particularly, the one made of a synthetic rubber for easy removal as proposed already by the present inventors in Japanese Patent Application No. 73916/1999. Here, if two given points of the pole member 112 have heights denoted by h1 and h2 (heights from the upper surface of the bottom of the crucible former 11) and diameters at that heights are denoted by a1 and a2, then, the taper stands for a value defined by the following formula,

$$|(a1 - a2)/(h1 - h2))|$$

After the wax pattern 9 is secured as described above, a solid lubricant is applied onto the surface of the wax pattern 9 and, as required, onto the surface of the sprue line 10. Then, the solid lubricant is transferred onto the surface of the investment material when the wax pattern is burned and, whereby, a solid lubricant film is formed in the mold, making it possible to shorten the molding time when the ceramic material is put into the mold.

There is no particular limitation on the method of applying the solid lubricant. Preferably, however, a suspension containing a solid lubricant powder, an organic solvent and an organic binder (hereinafter also simply referred to as coating solution) is applied to the surface of the wax pattern 9 and, as required, to the surface of the sprue line 10, and is dried.

There is no particular limitation on the solid lubricant which is a component of the coating solution provided it is a solid that exhibits a lubricating action. Concrete examples of the solid lubricant that can be preferably used in the present invention include tungsten

index of the glass material by 0.01 to 0.1, and having an average particle diameter of from 0.1 to 10 μm, in order to suitably lower the degree of transparency after baking so that the color of the underlying core will not appear conspicuously, thereby to obtain a color tone close to that of a natural tooth. The above-mentioned effect is not obtained when the inorganic powder added to the glass material is not crystalline but is amorphous, or when the inorganic powder to be added to the glass material has at least any one of the refractive index, particle diameter or amount of addition that lies outside the above-mentioned ranges though it is crystalline. From the standpoint of the effect, it is more desired that the difference (Δ) in the diffractive index is from 0.04 to 0.1, the particle diameter is from 0.1 to 5 μm and the amount of addition (parts by weight per 100 parts by weight of the glass material) is from 0.1 to 10 parts by weight.

There is no particular limitation on the inorganic crystalline powder used for the dental pottery material of the present invention provided its refractive index is different from the refractive index of the glass material by from 0.01 to 0.1. Here, the refractive index stands for that of the powder at 23°C, and can be measured by a method (liquid immersion method) in which a refractive index of a liquid organic medium having a predetermined refractive index is regarded to be the refractive index when the liquid becomes transparent by immersing the powder in the liquid. The refractive index of the above liquid organic medium can be measured by using the Abbe' refractometer. In general, the glass material has a refractive index of from 1.45 to 1.55. Therefore, preferred examples of the inorganic crystalline powder will be a quartz (refractive index of 1.54) which is a crystal of silicon dioxide, a cristobalite (refractive

drying was 20 μm. The applied coating solution was dried by being left to stand in the open air.

Then, a investment material mud {trade name: OK Powder, manufactured by GC Co.} was poured into the inner side of the casting ring and the crystal ribbon (backing member) so that the wax pattern secured to the crucible former was invested therein. After the investment material was cured, the crucible former was removed, followed by heating at 800°C to burn the wax pattern and the sprue line at 800°C thereby to prepare the mold.

(Example 1)

A coating solution was prepared from 4 parts by weight of a boron nitride powder having an average particle diameter of 2 μm, 2 parts by weight of an ethyl cellulose and 94 parts by weight of a methyl ethyl ketone. By using the mold prepared by using the above coating solution, the heated/pressurized molding was conducted in a manner as described below.

That is, the mold was, first, put into a ring furnace {trade name: VR7, manufactured by KDF Co.}, heated up to 800°C at a rate of 50°C a minute over about 15 minutes, and was maintained at this temperature for 45 minutes to pre-heat the mold. After pre-heated, the cylindrical plunger and the starting glass ingot were fitted to the ceramic-holding portion of the mold, which was then introduced into a heated/pressurized furnace that has been heated in advance at 900°C. Thereafter, the starting glass ingot was maintained at 900°C which was a pressing temperature for 10 minutes, and the glass material softened to a sufficient degree was pressurized at this temperature with a pressing load of 7.2 kg/cm² via a plunger so as to be put into the mold. After completely put into the mold, the glass material was maintained at 900°C for another 10 minutes and was, then, cooled. The mold was then broken and the molded article was taken out;